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MUNITIMES

Muni Plans Advanced Train Control System

Computerized train control to improve Metro performance

"It's the nearest thing to sliced bread as far as solving Muni's problems in the tunnel," says Chief Signal Engineer Tom Sullivan who is in charge of designing Muni's new automatic train control system.

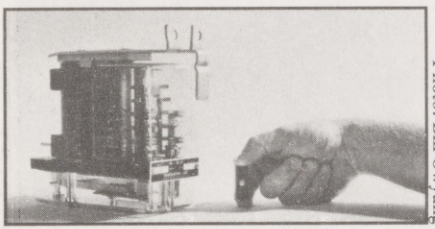

Photo: Bill Owyang

On the left is one of over 1000 relays used to control light rail vehicles in the Muni Metro subway under Market Street. On the right is an electronic circuit, equivalent to 1,000,000 relays, that will be used in Muni's future advanced train control system.

For the past few years, Sullivan has been working on a computerized system for Muni Metro in which the movement of trains in the tunnel is controlled by computer rather than by operator. Advanced electronic train control systems have been around for years in Europe and Canada, according to Sullivan, but the U.S. is way behind. Comparable systems to the one Muni will be getting are already well-known and successful in Vancouver, British Columbia and Lyons, France. In this country, they are operating in Detroit, Michigan and Jacksonville, Florida.

"Our main objective," says Sullivan, "is to provide San Francisco with a level of service for Muni Metro equal to the best European standards for performance, reliability and safety. To insure that this will happen (and to preclude the kinds of problems BART has had),

continued on back panel

NWS-FOT-10

Dear Rider,

First, let me thank those of you who have written positive letters about the *Muni Times* and complimented us on getting information to you, the passengers, about Muni's operations and projects. We wish we had room to print them all. We appreciate knowing that you understand that our work in each area is an effort to provide better public transportation to you.

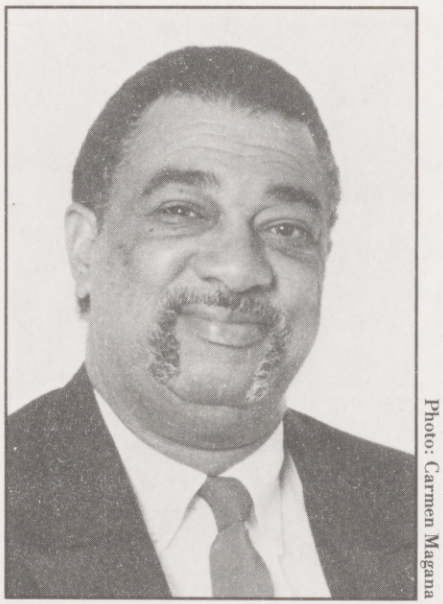

Photo: Carmen Magana

Johnny Stein.

We hope that you also enjoy this fall issue of the *Muni Times* and learning in more detail about Muni's future advanced train control system, which will improve service in the Muni Metro subway dramatically when it becomes operational in the mid-nineties. Other articles include a look at how a cable car works, a column on Muni's new *Data Guide*, information on service on the J-line extension to the Green Light Rail Center, and changes in the 82 X Levi Plaza Express line.

If there is anything you, as passengers, would like us to cover in the *Muni Times*, or questions you need answers to about areas of Muni's operation, please let us know and we will do our best to get that information to you. As always, we welcome your comments.

Sincerely,

Johnny Stein
General Manager

Letter to the Editor

Ms. Milner,

Just a short thank you for the work that you and your staff perform in producing the *Muni Times*. I almost always check the "information center" at the front of the coaches when boarding in hopes of picking up a new edition of the folded brochure. I especially enjoy reading about the operations and changes that Muni has planned. ...I can't wait to see the return of the streetcars on Market and the crossover at the Castro Street Station will help my commute a lot! The introduction of the electronic fareboxes is sure to make a difference in the collection of fares. The only people that seem to dislike the devices are those who never paid the full 85 cents anyway. Now, those people can't get away with stealing from Muni. Again, keep up the the good work!

Sincerely yours,
Mr. Boots McBride

Dear Muni Times,

I really appreciate your new "artic" class of buses. I'm a scooter messenger and I go all over the City. The worst part of my job is when I have to overtake either a 15 or 9 bus...(which) spit out voluminous amounts of noxious fumes.

Venting the exhaust at the top dilutes the amount of fumes I'm exposed to. I applaude you for your concern for bus riders, pedestrians and vehicle traffic, especially anyone on two wheels. Thank you.

Donn Dalton

Credits

MUNI TIMES is published by the Community Affairs Department of the Municipal Railway for the passengers of Muni. Comments and suggestions may be sent to:

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Limited Service Starts on J-Line Extension

Passenger service has begun on the J-line extension between Church and 30th along San Jose Avenue to the Green Light Rail Center at San Jose and Geneva on J and N line light rail vehicles pulling in and out of service in the morning and afternoon.

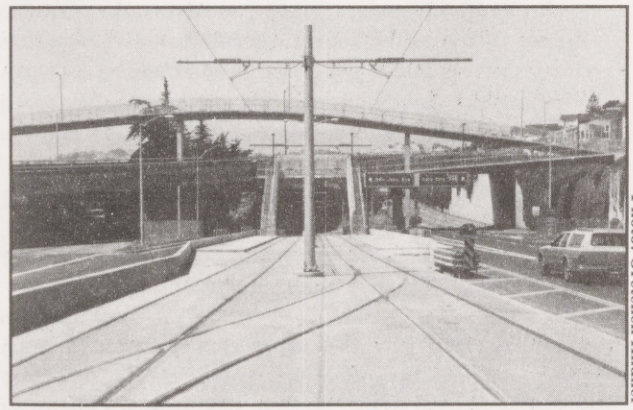


Photo: Gretchen Hildner

Limited service has begun on the new J-line extension along San Jose Avenue to the Green Light Rail Center.

Service on the J extension began at the end of August, following a two-week testing and operator training period on the new tracks.

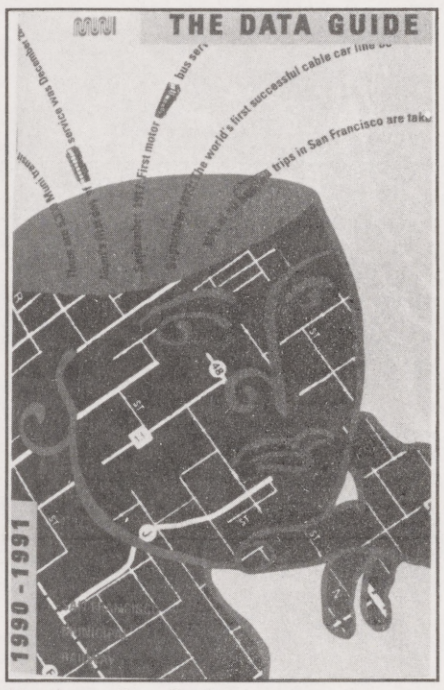
Before the extension was complete, both J and N cars had to enter the Metro tunnel by going all the way out on the K line to West Portal. The extension allows J and N cars to travel directly to the tunnel from the Green Center via San Jose and Church.

Full regular passenger service carrying riders throughout the entire day is scheduled to begin on the J line extension in January. Until that time passengers may board light rail vehicles pulling into service inbound at the following stops: San Jose and Ocean, San Jose and Santa Ynez, San Jose and Santa Rosa, San Jose and Glen Park Station, San Jose and Randall and 30th and Dolores. Outbound, LRVs returning to the Green Center in the evening will stop at: 30th and Dolores, San Jose and Randall, San Jose and Santa Rosa, San Jose and Santa Ynez, San Jose and Ocean and Balboa Park Station.

Muni's New *Data Guide*

A plethora of facts and figures about the Railway

Did you ever wonder just how many vehicles Muni has, or how many people ride buses in San Francisco, when Muni actually began operating or what the future holds for Muni? You can obtain answers to these and a variety of other questions about Muni in the first edition of Muni's *Data Guide*.



Muni's new Data Guide.

The *Data Guide* presents background information about Muni to anyone who wants to learn more about the Railway's organization and service, including modern and historic vehicles, ridership, facilities, transit history, management structure, budget, future capital projects, fares and employees.

The attractive 52-page booklet's cover features a Picasso-like drawing of a face in black and red superimposed over a portions of a Muni map. It was edited by Bob Callwell of Muni's Community Affairs Department and is available free of charge from Muni Headquarters, Room 238, 949 Presidio Avenue at the corner of Geary and Presidio. Supplies are limited. If you are interested in learning more about Muni, stop by for a *Data Guide* soon.

Muni Drivers Show Their Skill

Muni team wins first place at Regional Roadeo

The winners of the 1991 Municipal Railway Roadeo, Romeo Arriaza, Rafael Cabrera and Manual Caceres, competed in the Northern California Regional Bus Roadeo in Stockton in August and won First Prize as the driving team with the highest score.

In addition, Arriaza, First Place winner at Muni's Roadeo, came in second behind operator Albert Breeden of Golden Gate Transit. Arriaza and the Muni team competed against drivers from Stockton Transit, Santa Cruz Transit, SamTrans, Santa Clara County Transit, Golden Gate Transit, Alameda County Transit, Sacramento Transit, Contra Costa County Transit, Fresno Transit, Santa Rosa Transit, Sonoma Transit and BART Express.

Arriaza, who also represented Muni at the APTA International Bus Roadeo in Toronto on October 1st, came in ninth.

Did You Know...

Muni's operating budget for Fiscal Year 1990/91 was $262.1 million. Of that amount, only 29.3 % or $76.8 million came from passenger fares, 47.2 % or $123.7 million came from the City's General Fund. The remaining 23.5% or $61.6 million came from state, regional, federal and other funding sources.

Happy Birthday Trolley Coaches

50th anniversary of trolley coach operation in September

September 7th was the 50th anniversary of Muni's trolley bus operation. On that day in 1941, service began on the R Howard line, Muni's very first trolley bus line. Nine coaches, built by the St. Louis Car Company began operating from Beale and Howard via Howard and South Van Ness to Army.

Waterfront Transportation Projects Start This Month

Groundbreaking on October 28th

Mayor Art Agnos and Congresswoman Nancy Pelosi kicked off construction of the Waterfront Transportation Projects, billed as "the next step in San Francisco's waterfront renaissance," at a groundbreaking ceremony on October 28th.

Now that the Embarcadero Freeway has been removed, the Embarcadero surface roadway in front of the Ferry Building will be reconstructed and realigned. In essence, The Embarcadero will be opened up with the building of public transit, vehicle, bicycle and pedestrian traffic facilities. This will improve transportation to Fisherman's Wharf, North Beach, Telegraph Hill, Chinatown, Mission Bay and the downtown area, while providing views of the Bay and direct access to the waterfront.

Construction will occur in four segments: South Embarcadero along Folsom and The Embarcadero to Third and King; North Embarcadero on The Embarcadero between North Point and Broadway; Muni Metro Turnback in the Metro subway from Market and Drumm to Folsom and Steuart; and King Street between Third and Sixth Streets. Construction will also accommodate the F-line along Market Street and The Embarcadero to Fisherman's Wharf for the eventual operation of historic streetcars along the waterfront.

The Waterfront Transportation Projects are a joint effort of the Mayor's Office, the Chief Administrative Officer, the Port of San Francisco, the Department of Public Works, the SF Public Utilities Commission/SF Municipal Railway, the Department of Parking and Traffic, City Planning, the Arts Commission and the Redevelopment Agency. The projects are being funded by local, state and federal grants and are scheduled for completion by 1995.

Free Cable Car Rides Given

Del Monte Celebrates its 100th anniversary

On Friday, September 20th, cable car passengers took advantage of San Francisco-based Del Monte Foods sponsorship of all three cable car lines and rode San Francisco's moving historic landmark free all day long.

Del Monte sponsored the cable car lines as part of its 100th anniversary celebration, which also included free samples of Del Monte products at One Market Plaza and free entertainiment by a Dixieland band on a motorized cable car throughout the Financial District!

Photo: Ken Johnson

A Blast From the Past

You might recognize the photo pictured here as the entrance to Golden Gate Park at 7th Avenue and Fulton. You probably never realized that this entrance

A steam engine in Golden Gate Park?

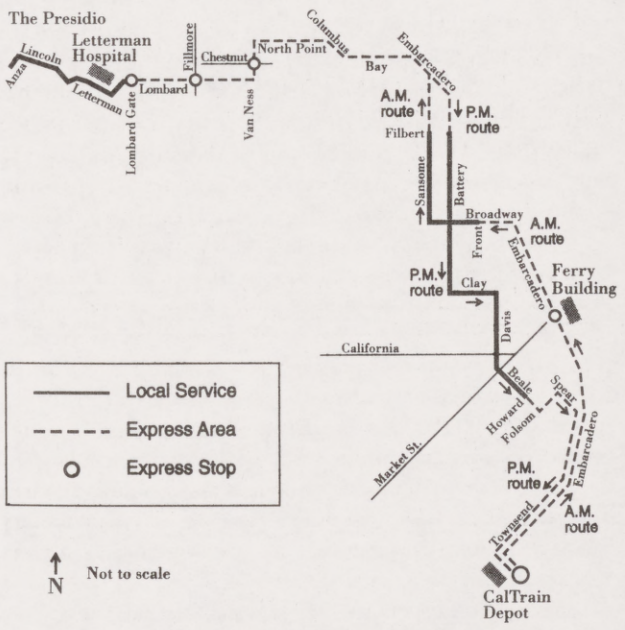
was originally part of the Powell Street Railroad Company, also known as the Ferries and Cliff House Railway, which ran a line down California Street around Land's End to a terminal north of the Cliff House in the late 1880's. The steam line pictured here was a branch that traveled down 7th Avenue from California entering Golden Gate Park during the late 1880's to 1894 when the Ferries and Cliff House Railway was consolidated into the Market Street Railway.

On the Move

Express route changes

The 82X Levi Plaza Express has been combined with the reverse route of the 30X Marina Express for more efficient weekday service from the 4th and Townsend CalTrain Depot to Levi's Plaza and the Presidio in the morning, and from the Presidio and Levi's Plaza to the CalTrain Depot in the afternoon.

The 30X will continue to provide weekday service from the Marina to the Financial District in the morning and from the Financial District to the Marina in the afternoon.

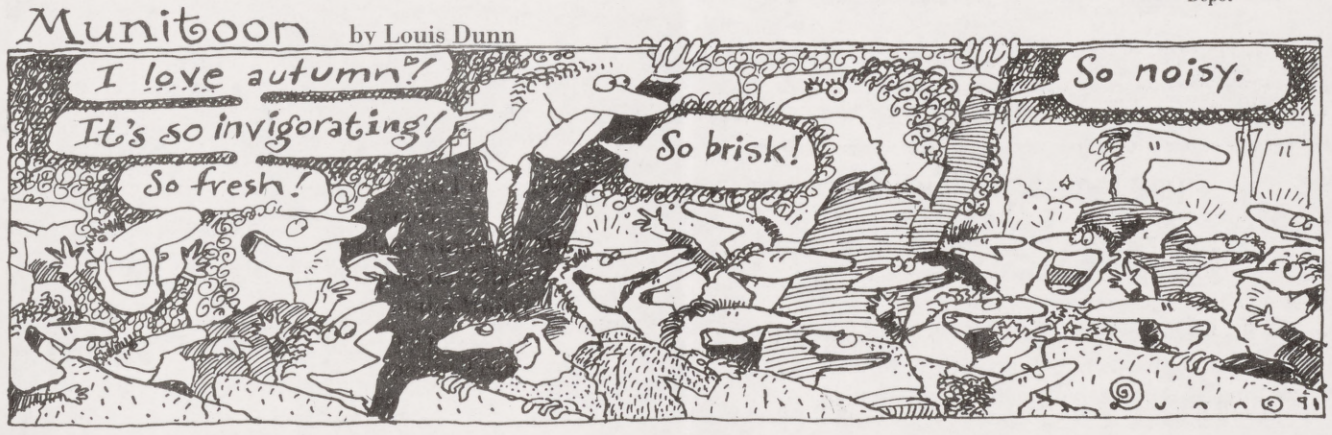


More Awards for the Railway

APTA Adwheel honors Muni

The American Public Transit Association has awarded Muni two First Place awards in the 12th Annual Adwheel Awards Competition. The awards are for the Large Transit System Print Media Category for Billboards and for Passes and Tickets.

Muni won out of 1000 entries for the "Bus Stops Here/Muni Takes you There" campaign and for the Muni Passport. Congratulations to Community Affairs Marketing and Promotion Manager John Corser, who directed these campaigns and to Kim Weller Design and John Noble Advertising Inc. for their innovative designs.



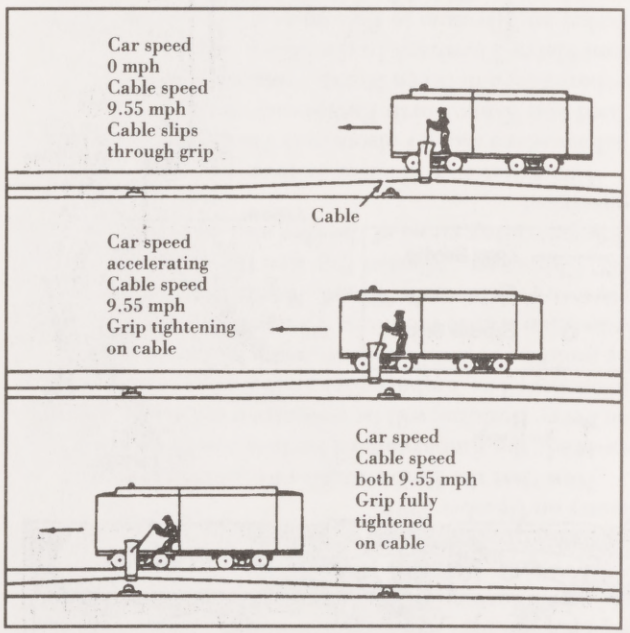
Behind the Scenes

How does a cable car work?

If you've ever wondered about this, here's a simplified explanation. A metal cable, whose operation and speed of 9.55 mph is controlled at the Cable Car Barn at Washington and Mason Streets, runs under the street on each cable car line.

In order for a cable car to move, the gripman uses a device called —you guessed it— a grip, to grab hold of the cable.

When you see the gripman pulling back on the grip lever, a pair of dies attached to the bottom of the lever squeezes the cable and the car accelerates up to cable speed when the grip lever is pulled back as far as it will go. During passenger stops, the gripman places the grip lever about half-way forward allowing the cable to slip through the grip and the car to stop.



Rules of the Ride

Have your pass or fare ready before boarding. If you are not ready when you reach the farebox or if you need to ask the operator questions about your destination, please stand aside, behind the operator and the yellow line, allowing other passengers to board freely.

Train Control System *continued from front panel*

the company chosen to supply Muni's new control system must have an existing system that both meets our needs and has a proven track record of successful operation."

The main advantage of a computerized train control system is that it will allow Muni to run more trains in the tunnel, thereby improving frequency of service and reducing waiting time for passengers. Under its present system, which is operated through a series of antiquated electrical relays whose technology is more than 100 years old, Muni can run only 20-23 trains per hour in the subway. With advanced train control and its use of electronic circuits, that number will rise to 40-60 trains per hour, or a train every 60-90 seconds in each direction. From the passenger's perspective that will mean fewer delays in the subway and a quicker ride downtown.

Another advantage is cost and reliability. Over 1000 relays at a cost of $500 apiece with thousands of breakable moving parts and wires presently control Muni's light rail vehicles under Market Street. One electronic circuit, equivalent to 1,000,000 relays, costs only $5 and is 1/100 the size.

According to Sullivan, there are higher demands on San Francisco's subway system than any other subway system in America with the exception of Boston's. With Muni Metro, five surface lines merge into one line downtown, resulting in a maximum load on the system. The merging of these five lines is presently controlled semi-automatically by the trains' operators and supervisors through a system of signal lights.

Under advanced train control, a computer at Muni's Central Control will handle the trains' entry, speed and stops in the tunnel by communicating with a computer on each train. Each train will be in constant two-way communication with Central Control, which will be able to tell a train to stop or go at any time.

Sullivan stresses that advanced train control will not make Muni Metro a driverless system. Operators will still run the light rail vehicles manually on the surface tracks and will be on the trains when the computers take over underground.

Implementation of the advanced train control system will be timed with acquisition of new light rail vehicles and the Muni Metro Turnaround Project, designed to eliminate the bottleneck caused by the stub-end of tracks at Embarcadero Station. The target date for these extensive Muni Metro improvements is 1995.